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(54) Credit card or the like

(57) A basic sheet or lamina (1) of the card receives micro-film or micro print data or information (3) printed or applied on a face area (10 or 11) of the sheet (1). The data (3) is such that it cannot normally be ascertained by the naked eye but on insertion of that part of the card bearing the data (3) into a suitable reader or projector the data can be viewed on an enlarged scale. The face area may provide a transparent window (10) for enlarged scale viewing of the data (3) thereon by light passing through it or the face area (11) may receive the data (3) for enlarged scale viewing by reflected light in a reader or projector. The data (3) may include in particular a photograph of the face of the authorised holder of the card together with other personal details, bank account number etc. and preferably medical information.

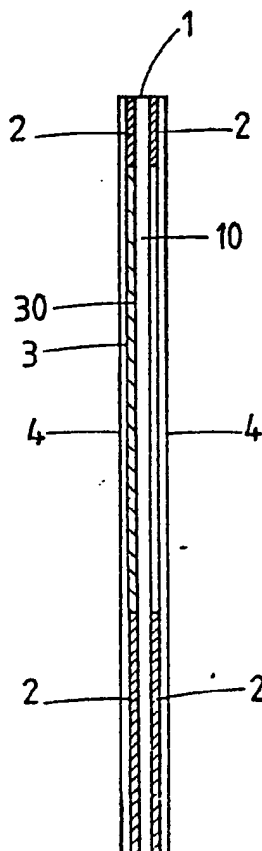


Fig. 2.

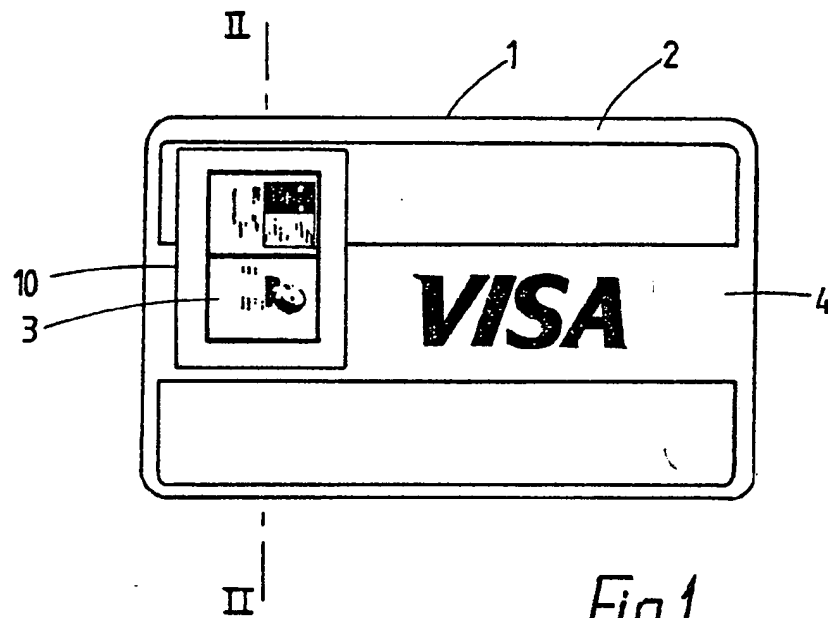


Fig. 1.

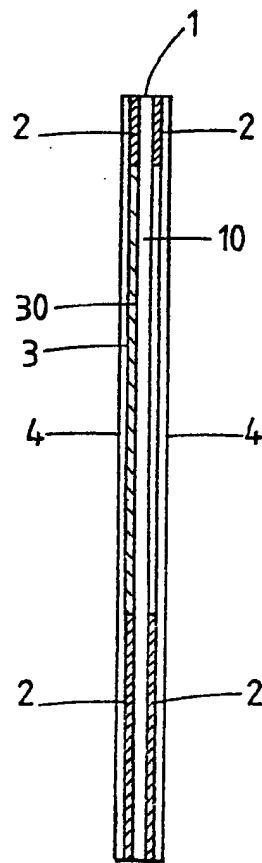


Fig. 2.

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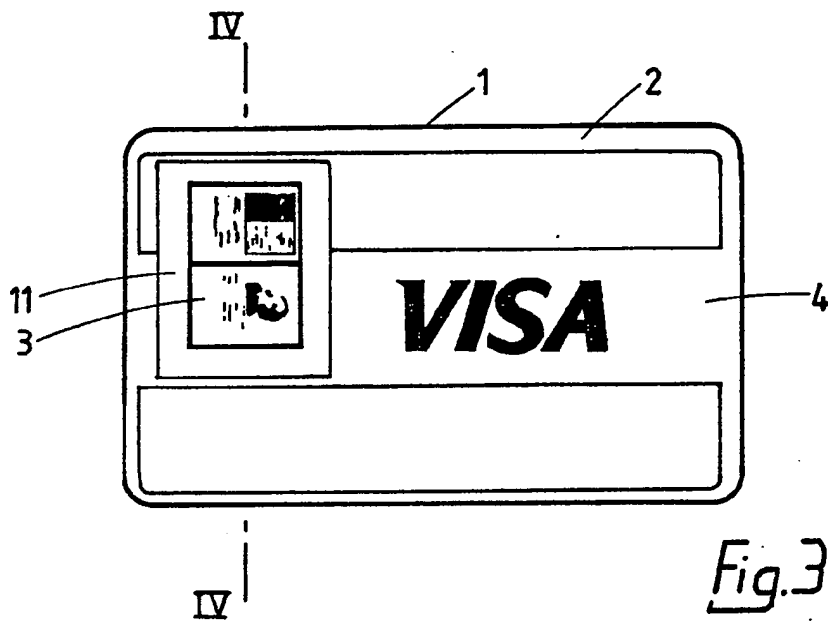


Fig. 3.

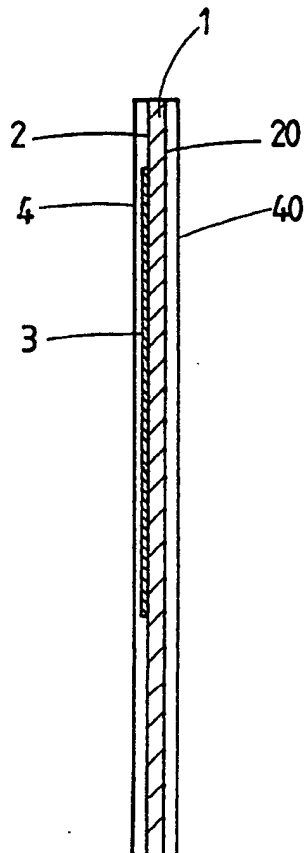


Fig. 4.

SPECIFICATION

Credit card or the like

5 The object of this invention is to provide an improved credit card or similar card such as a bank cheque card or identity card whereby fraudulent use or forgery is very largely prevented. Practical advantages in this and other respects will be apparent from the following disclosure.

10 According to this invention a credit or similar card is characterised by a basic sheet or lamina of the card receiving, or adapted to receive, microfilm or micro-print data e.g. of the authorised holder of the card printed or otherwise applied on at least one face area of the sheet or lamina whereby the microfilm or micro-print data can be viewed on an enlarged scale such as by means of viewing or projection apparatus.

20 The invention further includes the method of manufacture of the card comprising printing or otherwise applying microfilm or micro print data e.g. of the authorised holder of the card on at least one face area of a basic sheet or lamina of the card for viewing on an enlarged scale such as by means of viewing or projection apparatus.

Practical examples of the card and its production are as follows, reference being made to the accompanying drawings in which:-

30 *Figure 1* is a face view of the card,

Figure 2 is an enlarged scale cross section taken on the line II-II of *Figure 1* in which thicknesses have been exaggerated for the sake of clarity,

Figure 3 is a face view of an alternative form of the card, and

Figure 4 is an enlarged scale cross section taken on the line IV-IV of *Figure 3* in which thicknesses have also been considerably exaggerated.

Like parts are referred to by the same or similar reference numerals throughout the drawings.

Referring to *Figures 1* and *2* the basic sheet or lamina 1 of the card is of suitable transparent plastic material e.g. polyester film which is preferably clear but may be tinted.

45 One or preferably both faces of the sheet 1 is or are coated with a preferably opaque (or translucent) coating 2 of any suitable colour or colours except at a face area (or if necessary more than one area) to leave a window 10 of the exposed transparent plastic material for passage of light therethrough. Such coating 2 may be effected by silk screen printing with a suitable ink.

50 One side of the plastic sheet material 1 at the window 10 is treated with a light sensitive coating or emulsion 30 e.g. on a polyester base and onto which microfilm or micro print data or information 3 is directly photographically printed. Alternatively, the microfilm or micro print data or information 3 on thin film material may be applied to the sheet material 1 at the window 10 but for satisfactory results direct printing of the data 3 onto an emulsion coated window 10 is preferred in practice.

After such printing or application in order to complete the card ready for issue to the authorised holder the front face and preferably the rear face of

the basic sheet or lamina 1 including the microfilm or micro print data 3 are sealed by protective facings 4 of clear transparent plastic film. Such facings are applied by a hot pressing process involving a temperature of the order of 167° (300°F) which the plastic lamina 1, silk screen printing 2 and printed emulsion 30 are capable of withstanding.

70 The microfilm or micro print data 3 on the window 10 can be viewed by light transmitted through it i.e. on an enlarged scale in a suitable reader or projector as subsequently referred to below.

Referring to *Figures 3* and *4* the basic sheet or lamina 1 of the card is of suitable plastic material such as that used for present day credit card manufacture.

80 One face 2 of the sheet or lamina 1 receives a microfilm or micro print data 3 applied to an area 11 of the sheet 1 or printed on it so that the data can be viewed by reflected light rather than by light transmitted through it i.e. for viewing on an enlarged scale as hereinafter referred to. Particularly in the case of microfilm data 3 applied to the sheet 1 a backing of white or other suitable light colour is provided for the microfilm data 3 so that it can be effectively viewed by reflected light. Such backing can be conveniently provided by a white or other light coloured area 11 of the face 2 to which the microfilm data 3 is applied.

95 More than one area 11 of the face 2 may be provided each receiving a microfilm or micro print data 3 as required. Although not usually necessary the other or rear face 20 of the sheet 1 may similarly receive microfilm or micro print data.

100 After such application or printing and in order to complete the card ready for issue to the authorised holder the front face of the basic sheet or lamina 1 and microfilm or micro print data 3 thereon are sealed by a protective facing 4 of clear transparent plastic film in the manner already referred to. Preferably the rear face is similarly faced at 40.

105 In either form of the card described above the microfilm or micro print data or information 3 provides details of the authorised holder including in particular a photograph of the face of the holder and other personal data e.g. colour of eyes and hair, height etc. as well as bank account details such as account and code numbers, credit limit, specimen signature and so on. In this way the card also serves as an identity card and in order that it may be more generally useful the microfilm or micro print information 3 may include medical data of the holder e.g. blood group and reference to any drug or drugs to which the holder is allergic.

120 In the usual manner and for normal use of the card the front of it may be embossed with the holder's serial number and name and also the validity dates. Alternatively or additionally such marking may be effected by holography. The back of the card may also bear the usual authorised signature strip and printed conditions of use.

125 Whereas the microfilm or micro print information 3 cannot be ascertained or readily ascertained by the naked eye (even with the aid of a magnifying lens) during normal use of the card so that

such information remains in effect confidential, the arrangement is such that on insertion of the card, or that part of the card bearing the microfilm or micro print information 3 into a suitably adapted 5 reader or projector such information can be shown in greatly enlarged form on the screen of the reader or in a similar manner so that the information can be clearly checked. For reflected light use the projector may be in the nature of an epidia- 10 scope.

In the general use of credit or similar cards according to this invention, banks and retail or other establishments accepting the cards are provided with a reader and on a counter clerk or the like 15 having any doubt as to the authenticity of a person presenting the card, the microfilm or micro print information 3 on it can be checked in the reader and compared with the face and other physical details of the person presenting the card and also 20 preferably by comparison with a duplicate microfilm or the like record held by the bank or establishment and which may be viewed by the reader alongside that of the card for direct comparison.

For this latter purpose appropriate duplicate microfilm or micro print records of card holders 25 would be kept by banks and other establishments e.g. in microfiche form and the manufacture and issue of the cards would be by joint cooperation of the manufacture and banks or other authorities issuing the cards. 30

As will be appreciated from the foregoing the possibility of the fraudulent submission of a credit or similar card and the obtaining of credit such as by the purchase of goods, commodities or services 35 e.g. by means of a stolen credit card, is virtually prevented or very largely minimised. Furthermore, and in view of the manufacturing techniques entailed, forgery of the cards is also effectively discouraged. 40

CLAIMS

1. A credit or similar card characterised by a basic sheet or lamina of the card receiving, or 45 adapted to receive, microfilm or micro print data e.g. of the authorised holder of the card printed or otherwise applied on at least one face area of the sheet or lamina whereby the microfilm or micro print data can be viewed on an enlarged scale such 50 as by means of viewing or projection apparatus.

2. A credit or similar card according to claim 1 wherein the face area is transparent or otherwise suitably light transmitting so as to serve as a window for viewing of microfilm or micro print data 55 thereon by means of light passing through it e.g. in viewing or projection apparatus.

3. A credit or similar card according to claim 2 wherein the basic sheet or lamina of the card is transparent or otherwise suitably light transmitting 60 and has a coating of opaque or translucent material on one or both faces thereof except at said face area.

4. A credit or similar card according to claim 3 wherein the coating of opaque or translucent material is provided by silk screen printing on one or 65

both faces of the basic sheet or lamina.

5. A credit or similar card according to claim 1 wherein the face area receives, or is adapted to receive, microfilm or micro print data thereon for 70 viewing by light reflected therefrom e.g. in viewing or projection apparatus.

6. A credit or similar card according to claim 5 wherein the face area is of white or other suitable light colour to facilitate viewing of microfilm or micro print data thereon by reflected light. 75

7. A credit or similar card according to any of the preceding claims wherein the face area is treated with a light sensitive coating or emulsion and onto which microfilm or micro print data is or 80 can be photographically printed.

8. A credit or similar card according to claim 7 wherein the face area is treated with the light sensitive coating or emulsion on a base such as a polyester base.

9. A credit or similar card according to any of the preceding claims wherein the microfilm or micro print data is applied on thin film material to the face area. 85

10. A credit or similar card according to any of the preceding claims wherein one or both faces of the basic sheet or lamina of the card including said face area and microfilm or micro print data on the latter are sealed by a protective facing of clear transparent material applied to the face or faces. 90

11. A credit or similar card when substantially as herein described with reference to Figures 1 and 2 or Figures 3 and 4 of the accompanying drawings. 95

12. A credit or similar card according to any of the preceding claims wherein the microfilm or micro print data includes a photographic reproduction of the face of the authorised holder of the card. 100

13. Method of manufacture of a credit or similar card according to any of the preceding claims wherein the method comprises printing or otherwise applying microfilm or micro print data e.g. of the authorised holder of the card on at least one face area of a basic sheet or lamina of the card for 105 viewing on an enlarged scale such as by means of viewing or projection apparatus.

14. Method of manufacture of a credit or similar card according to claim 13 characterised by providing the face area of transparent or otherwise suitably light transmitting material so as to serve as a window for enlarged scale viewing of the microfilm or micro print data printed or otherwise applied thereon by means of light passing through it e.g. in viewing or projection apparatus. 115

15. Method of manufacture of a credit or similar card according to claim 13 characterised by printing or otherwise applying the microfilm or micro print data on the face area whereby it can be viewed on an enlarged scale by light reflected from the microfilm or micro print data e.g. in viewing or projection apparatus. 120

16. Method of manufacture of a credit or similar card according to claim 13, 14 or 15 characterised by treating the face area with a light sensitive coating or emulsion and photographically printing 130

microfilm or micro print data onto said coating or emulsion.

17. Method of manufacture of a credit or similar card according to claim 13, 14 or 15 character-
5 ised by applying the microfilm or micro print data on thin film material to the face area.

18. Method of manufacture of a credit or similar card when substantially as herein described with reference to Figures 1 and 2 or Figures 3 and
10 4 of the accompanying drawings.